WEILUN SUN (孙伟伦)

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EDUCATION

BS **Tsinghua University**, Computer Science & Technology, *2010~2014*
Overall GPA: 88.3/100 Rank: 24/126

RESEARCH EXPERIENCE

SIGGRAPH ASIA 2013 Paper *Anisotropic Spherical Gaussians*, Tsinghua Graphics & Geometry Computing Group, Feb. 2013 ~ May. 2013
Advisor: Kun Xu

- Involved in the discussion and proofread some derivations of the new spherical function
- Implemented a rendering program based on theories in the paper
- Made most of result figures in the paper

SIGGRAPH 2013 Paper *Sketch2Scene:Sketch-based Co-Retrieval and Co-placement of 3D Models*, Tsinghua Graphics & Geometry Computing Group, Sep. 2012 ~ Jan. 2013
Advisor: Kun Xu

- Reproduced a single-model retriever according to SIGGRAPH 2012 paper *Sketch-based Shape Retrieval*
- Implemented part of the GUI in the project
- Involved in the discussion of the co-retrieval methods in the paper

Graduation Project of Yan Gu, Tsinghua Graphics & Geometry Computing Group , Mar. 2012 ~ Jun. 2012
Advisor: Kun Xu

- Reproduced a rendering program according to SIGGRAPH ASIA 2009 paper *All-Frequency Rendering of Dynamic, Spatial-Varying Reflectance*

PUBLICATIONS

Conference Papers

Kun Xu, Wei-Lun Sun, Zhao Dong, Dan-Yong Zhao, Run-Dong Wu, Shi-

Min Hu, "Anisotropic Spherical Gaussians," Proceedings of SIGGRAPH ASIA 2013(accepted)

Kun Xu, Kang Chen, Hongbo Fu, Wei-Lun Sun, Shi-Min Hu, "Sketch2Scene: Sketch-based Co-retrieval and Co-placement of 3D Models," Proceedings of SIGGRAPH 2013, ACM Transactions on Graphics 32(4) , 123:1--123:12, 2013.

SMALL PROJECT

Experiment of Machine Learning Methods in SIGGRAPH 2012 Paper *Sketch-based Shape Retrieval*, May. 2013

- Replaced k-means clustering presented in the paper with different clustering methods including fitting Spherical Gaussians with EM algorithm and k-medoids
- Made comparisons among different methods by statistical and retrieval results
- Implemented a complete retriever software with GUI using FLTK lib

Simple 3D Physics Engine, Jan. 2013

- Implemented rigid body collision simulation between sphere and net or fixed objects in any shape with friction under gravity field
- Took spinning into consideration
- Simulated net system using rigid spheres to represent knots and weightless springs to represent cords
- Created a basketball shooting game using the engine with appealing effects of interactions between basketball and hoop net

Drum Sound Extraction and Classification, together with my classmate Yi-Ning Liu and E.T. Chan, Oct. 2012 ~ Dec. 2012

- Implemented drum sound extraction algorithm by Matlab
- Developed a game on ios like *Taiko Drum Master*, but can automatically turn a new song track into a game level
- Leader of the group.
- Came up with the idea

HONORS AND AWARDS

First Prize of Beijing University Physics Olympiads, 2011

2nd place of Tsinghua Talent Show, 2012

LANGUAGES

Mandarin Chinese: Native Language
English: GRE V: 550 Q: 800 AW: 3.5
Toefl R: 28 L: 30 S: 23 W: 28 total: 109

COMPUTER SKILLS

Programming: c/c++, Java, Python, Matlab
Applications: OPENGL, GLSL, QT, Android, CUDA(still learning)
Platforms: Windows, Linux